

NOTES ON CULICIDAE COLLECTED IN SIERRA LEONE, WITH DESCRIPTIONS OF A NEW SPECIES AND A NEW VARIETY

BY

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PLATE III

Professor Blacklock has recently made numerous collections of larvae of Culicidae from very varied situations at Daru, and on the Cape Lighthouse Peninsula, near Freetown. These situations included many 'small enclosed collections of water' such as rot-holes in trees, and it may be interesting to compare these findings with those recorded by Macfie and Ingram (1923) from the Gold Coast.

The adults reared from these larvae were submitted to the writer for identification and have been found to comprise twenty-four species, seven of which do not appear to have been recorded from the Colony hitherto; one species is an undescribed member of the *apicoargentea* series of '*Stegomyia*,' and another a new variety of *Aedes* (*Aedimorphus*) *cumminsi*, Theo. The following is a list of the species contained in the collection; the material from Daru was collected in the latter half of September, 1924, and that near Freetown on the 17th and 18th August in the same year.

The types and co-type specimens described in this paper are in the collections of the Liverpool School of Tropical Medicine.

Anopheles costalis, Loew.

Daru: Stream, 1 ♂; 'Swamp A,' 14 ♂♂, 12 ♀♀; Stream to 'Swamp B,' 1 ♀; Moa River, 6 ♂♂, 2 ♀♀; Hospital drain area, 1 ♂; Cape Lighthouse Peninsula, Freetown: Rock-pool, 1 ♀.

Anopheles nili, Theo.

Moa River, Daru, 14 ♂♂, 12 ♀♀.

Professor Blacklock observed that during the short period of investigation this species did not enter houses frequently. The

following observation tends to show a striking contrast in this respect between *A. nili* and *A. costalis*. He noted that in a native's house that was only fifty yards away from the edge of the Moa river, where *A. nili* was breeding in large numbers, only one adult specimen of this species was to be found. At the same time more than one hundred *A. costalis* were captured in this house, although its breeding-ground was 'in a marsh (Swamp A) further away.'

Anopheles mauritianus, Grandpré.

'Swamp B,' Daru, 1 ♀.

Anopheles umbrosus, Theo.

'Swamp A,' Daru, 1 ♀.

Anopheles rhodesiensis, Theo.

Rock-pool, Cape Lighthouse Peninsula, near Freetown :
4 ♂♂, 6 ♀♀.

Uranotaenia fusca, Theo.

Daru : stream to 'Swamp B,' 3 ♂♂, 3 ♀♀; tree-hole, 1 ♀.

Uranotaenia nigripes, Theo.

Daru : in a pineapple found in an empty bungalow, 1 ♂, 2 ♀♀; in a tree-root in 'native S.M.'s yard,' 1 ♀.

Mimomyia hispida, Theo.

'Hospital drain area,' Daru, 2 ♂♂, 1 ♀.

Aedes (Stegomyia) argenteus, Poiret.

Daru : latrine washing-bucket, 1 ♀; Cape Lighthouse Peninsula, Freetown; rock-pool, 1 ♀; tree-hole, 3 ♂♂, 1 ♀.

Aedes (Stegomyia) africanus, Theo.

Daru : Between forks of three-stemmed tree at ground level, 1 ♂, 4 ♀♀; tree-hole, 2 ♂♂; banana tree, near bungalow, 1 ♂, 3 ♀♀; stream, 1 ♂.

Aedes (Stegomyia) simpsoni, Theo.

Daru : hole in root of tree, in 'native S.M.'s yard,' 1 ♀.

Aedes (Stegomyia) apicoargentea, Theo.

Daru : stream near river, 1 ♂, 1 ♀; latrine washing-bucket, 3 ♀♀.

AEDES (STEGOMYIA) BLACKLOCKI, sp.n. (Pl. III, fig. 1).

FEMALE.

Head and *palpi* with black and silvery-white scales arranged as shown in figure. *Thorax*. Mesonotum with silvery-white anterior patch formed of broad, flat scales in front and narrow curved scales behind. Middle line (largely denuded in the type) of narrow-curved, pale-yellow scales broadening posteriorly, the scales becoming silvery and forking to form two lines surrounding the ante-scutellar space; large paired silvery spots formed of broad curved scales; smaller silvery spots over wing roots of long curved scales; the scales forming the paired posterior lines very pale yellow, narrowly spindle-shaped. Scutellum with a few black scales behind the silvery ones on the median lobe, and one or two black scales internally on the right lateral lobe. Pleurae without lower mesepimeral bristles, a large patch of flat silvery scales on the upper part of the mesepimeron.

Abdomen. Dorsum of third segment with silvery-white scales forming an irregular and asymmetrical basal band. Fourth and fifth segments with well-developed silvery basal bands. Sixth and seventh segments with broad basal areas of silvery scales reaching to their distal borders in the middle. Third to seventh segments with large, basal, lateral, rectangular silvery spots, and ventrally with narrow basal silvery bands.

Legs. Front femora with a narrow line of white scales on the basal two-fifths anteriorly, and a line of silvery-white scales at the outer third, internally, not extending to the apex. Mid-femur with basal white spot; on the external face a median silvery spot, and a broad, apical, silvery patch continuous with a narrow, internal line of white scales extending backwards for nearly one-third the length of the segment. Hind femur creamy white at base beneath, with a conspicuous, silvery-white apical spot and a small, sub-median, external, silvery stripe. Front tibia with a narrow, basal, silvery-white ring, broadest beneath, mid tibia with a white basal patch beneath, hind tibia with a white spot near the base externally and a creamy-white stripe at the base beneath. Front tarsi with narrow, white bands on first two segments; mid tarsi with a basal, white band on the first segment, second segment creamy-white with a narrow, apical, black ring; hind tarsi with basal, white rings

about one-fourth to one-fifth the length of the segments, fourth segment white with a narrow, apical, black ring, fifth segment with a very small basal white band. Wing with dense black scales; length: 3.5 mm.

MALE.

Palpi with silvery-white scales forming a ring at about the middle of the long segment, a small, dorsal, sub-basal patch; small spots beneath the bases of the last two segments; occiput with several golden, upright forked scales behind; coloration of thorax and abdomen as in the female; but legs with mid tibia entirely dark, hind tibia with external white spot continuous with ventral stripe, last hind tarsal segment with basal half white. *Hypopygium* (Plate III. fig. 2) as in *C. (Stegomyia) apicoargentea*, but lobe of side-piece very narrow and furnished with three long bristles.

Co-type ♂♂ (2) and type ♀ bred from larvae taken from a tree-hole, Daru, Sierra Leone, 24.ix.1924, by Professor B. Blacklock and 1 ♂ and 1 ♀ taken from a tree-hole on the Cape Lighthouse Peninsula, near Freetown, 18.ix.1924.

In the specimens from the neighbourhood of Freetown, the third abdominal segment is without a white basal band, in the male this segment is completely dark-scaled, but in the female one or two whitish scales occur in the basal region.

This species is obviously one of the *apicoargentea* series of *Stegomyia* (Edwards, 1925) and appears to come nearest to *A. (S.) poweri*, Theo., from which it differs in having:—the silvery margin to the eyes not interrupted by dark spots; the large silvery areas on the mesonotum very broadly oval, not crescent-shaped; the basal abdominal bands not dull white, but markedly silvery; the fourth hind tarsal segment not all white and the fifth not all black.

Aedes (Finlaya) longipalpis, Grünb.

Daru: banana fibre, Mailemma, 1 ♂; tree-root, 3 ♂♂, 1 ♀; hole in tree-root, 5 ♂♂; tree-hole, 1 ♂, 1 ♀; stream, 1 ♀.

Aedes (Aedimorphus) apicoannulatus, Edw.

Tree-hole, Cape Lighthouse Peninsula, Freetown, 1 ♂, 1 ♀.

Aedes (Aedimorphus) domesticus, Theo.

Daru: 'Swamp A,' 1 ♀; 'Swamp B,' 1 ♂, 1 ♀; Moa River, 1 ♂.

Aedes (Aedimorphus) tarsalis, Newst.

Daru: tree, 1 ♂, 1 ♀; Moa River, 2 ♂♂; 'Swamp A,' 8 ♂♂, 18 ♀♀; 'Swamp B,' 3 ♂♂, 7 ♀♀; stream to 'Swamp B,' 1 ♂.

***Aedes (AEDIMORPHUS) CUMMINSI* var. *DARUENSIS*, n. var.**

This variety differs from typical *A. cumminsi* as follows:—*Head* with the narrow curved scales creamy white. *Mesonotum* with very pale, brassy, rather long, narrow-curved scales and with short, dark-brown, almost hair-like scales concentrated in certain areas as follows:—a narrow, median stripe extending from the anterior border for about two-thirds the length of the mesonotum; a pair of broadly ovate patches just in front of the sutures; an inner and outer pair of stripes extending from the ante-scutellar region to beyond the posterior extremity of the middle stripe. *Abdomen* with small, but well-defined median, basal, pale spots on the third to seventh segments. *Tibiae* with well-marked white, apical spots, *femora* with apices narrowly pale. *Male hypopygium*—clasper as shown in Plate III, fig. 3.

Type ♂ and type ♀ reared from larvae, Moa River, Daru, Sierra Leone, 18.ix.1924, Professor Blacklock. One other female from the same locality.

The abdomen of the male is greatly contracted so that it is impossible to see whether median spots are present or not.

Mr. F. W. Edwards has kindly examined the type ♀ and tells me that though it seems near the var. *mediopunctata* of *cumminsi*, there are differences, and that in certain aspects it approaches *A. (Aedimorphus) caliginosus*.

Culex decens, var. *invidiosus*, Theo.

Daru: tree-hole, 1 ♂, 1 ♀; 'Swamp A,' 28 ♂♂, 42 ♀♀; 'Swamp B,' 1 ♀; 'hospital drain area,' 30 ♂♂, 49 ♀♀. Cape Lighthouse Peninsula, Freetown: rock-pool, 1 ♀.

Culex annulioris, Theo.

Daru: 'Swamp A,' 1 ♂; latrine washing-bucket, 1 ♂.

Culex thalassius, Theo.

Rock-pool, Cape Lighthouse Peninsula, Freetown, 16 ♂♂, 17 ♀♀.

Culex (Culiciomyia) nebulosus, Theo.

Daru : banana tree, Mailemma, 19 ♂♂, 14 ♀♀; old mortar, near river, 4 ♂♂; tree-holes, 8 ♂♂, 5 ♀♀; kerosene tin, 1 ♂; stream, 4 ♂♂, 1 ♀; stream near river, 1 ♂.

Lutzia tigripes, var. *fusca*, Theo.

Daru : swamps 'A' and 'B', 5 ♂♂, 5 ♀♀; 'hospital drain area,' 1 ♂, 8 ♀♀.

Toxorhynchites brevipalpis, Theo.

Daru : fork in orange tree, Mailemma, 1 ♀; 'hospital drain area,' 1 ♀.

Eretmapodites chrysogaster, Graham.

Daru : banana tree, Mailemma, 3 ♂♂, 6 ♀♀.

REFERENCES

- EDWARDS, F. W. (1925). Mosquito Notes, V. *Bull. Ent. Res.*, Vol. XV, p. 257.
- MACFIE, J. W. S., and INGRAM, A. (1923). Certain Nurseries of Insect Life in West Africa. *Bull. Ent. Res.*, Vol. XIII, p. 291.

PLATE III

EXPLANATION OF PLATE III.

- Fig. 1. *Aedes (Stegomyia) blacklocki*, sp.n. ♀. × 50 about.
- Fig. 2. *Aedes (Stegomyia) blacklocki*, sp.n. Male hypopygium.
l.—lobe of side piece; *p.*—phallosome; *pl.*—lateral
plate of anal lobe.
- Fig. 3. *Aedes (Aedimorphus) cumminsi* var. *daruensis* var. n. Side-
piece of male hypopygium.



FIG. 1

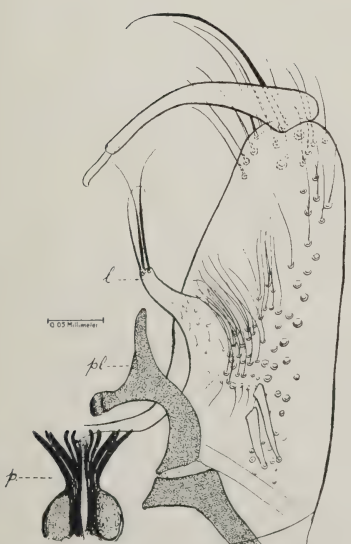


FIG. 2

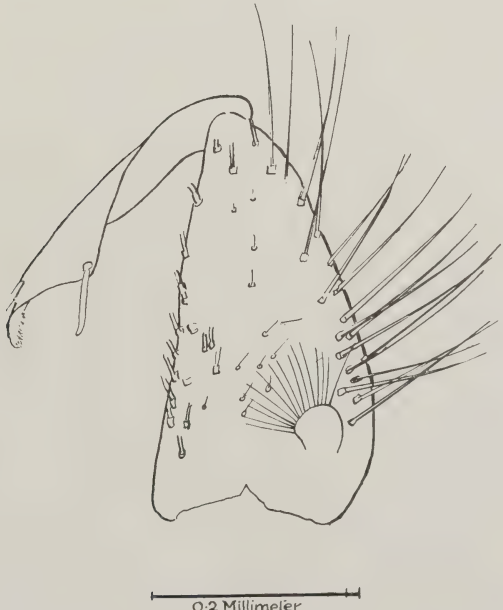


FIG. 3